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Autohaemotherapy in Bovine Papillomatosis

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Introduction

Bovine Papillomatosis is caused by Bovine Papilloma virus, a Papova virus having double stranded deoxy ribo nucleic acid (DNA) in it's genome. There are six types of Bovine Papilloma virus affecting cattle and horse and same type of viruses are isolated from papillomatus lesions of sheep, goat, swine, dog, rabbit and human beings. In cattle, the papillomatus growths are seen on skin of face, neck, anteroventral parts of the body, legs, teats and also at many other parts of the body. The warts are having the size of a grain to a cauliflower like appearance of upto 6-7 centimeter in diameter. They are dry, rough and spiny in some cases and smooth in others according to the type of Papilloma virus infection. The virus infects the basal cells of the epithelium causing the hyperplasia of cells of the stratum spinosum layer of skin with the subsequent degeneration and hyper keratinization. Generally, the papillomatus mass contains variable quantities of epithelial and connective tissues. In association with certain co-factors, this Papilloma virus may also produce malignant Carcinomatus growth.

Treatment of Bovine Papillomatosis by the injection of preparations containing antimony and bismuth and removal of wart mass by surgical operation, traction or ligation are common, but these can not bring any promising result. Treatment by autologous vaccine prepared from the wart tissues of the affected animals confer varying results for different types of Papillomatus growth. Sometimes such vaccination may increase the size of the warts or prolongs the course of the disease.

The present treatment was conducted in last two years on sixteen cattle of various ages, all of which were suffering from Bovine Papillomatosis.

Materials & Methods

Skin on the jugular vein of affected animal was shaved and disinfected by 70% ethyl alcohol. Then by using 20 c.c. disposable syringe, 20 ml of blood was collected from the jugular vein of the animal. After collection of blood, 10 ml of blood was immediately injected subcutaneously to the animal at the neck region and 10 ml of blood was injected intramuscularly at the gluteus muscle of the thigh region of the animal. The process was repeated at seven day's intervals.

Results & Discussion

The papillomatus mass gradually dried and at last fall. Then the skin of the animal became normal within a few days. In all the sixteen cases treated so far, the cure of the animal was obtained after 3-4 times of injection of their own blood.

The growth of tumor is actually the growth of abnormal cell or the growth of nor-

mal cells at an abnormal manner by-passing the immunological surveillance of the animal body. This surveillance include the humoral immune response of production of antibodies against any abnormal cell antigen and destruction of such abnormal cells by antibody dependent cell mediated cytotoxicity along with the cytotoxicity generated by the cells like macrophages, cytotoxic T lymphocytes or Natural Killer cells. The growth and development of tumor is due to the failure of this system for any of various reasons.

In the present study, the abnormally grown epithelial and fibrous tissues die after injection of self blood of the animal. It may be the case that the autohaemotherapy may help the immune system of the body of affected animals to know and identify the abnormality of the virus induced cells and also help to correct the actual reason of failure in immunological protective mechanism of animal's body which allowed such abnormal cell proliferation. More intense study may help to know clearly the actual reason behind the cure of the disease.

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